REMARKS

Claims 1-19 are pending in the present application. Of these claims, claims 1-4 and 11 stand rejected and claims 5-10 and 12-19 have been indicated as allowable. The Applicants respectfully traverse the rejections and request reconsideration in light of the following comments.

In particular, claims 1-4 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vembu (U.S. Patent No. 6,259,928) in view of Dohi (U.S. Patent No. 6,341,224). The Applicants respectfully traverse this rejection for the following reasons.

With respect to independent claim 1, in particular, the present Office Action asserts that Vembu discloses all of the claimed elements except for explicitly disclosing BER and a variance value of the error. The Office Action asserts that using BER and a grade of the variance value of the error in order to determine SNR is well known in the art. Dohi, in particular, is asserted as teaching these elements and that it would have been obvious for one of ordinary skill in the art to measure BER, calculate variance value of error/BER in order to determine the target SIR as taught by Dohi with the system of Vembu in order to achieve transmission power control that provides consistent channel quality regardless of propagation environment or receive SIR. The Applicants disagree with these assertions for numerous reasons below.

First, claim 1 features "adjusting a SNR threshold in accordance with the actual SNR threshold adjusting step value" which is determined "based on the calculated grade of the SNR threshold adjusting step value." The grade of the SNR threshold adjusting step value is calculated in accordance with "the grade of the error and the grade of the variance value of the error." Then, the actual SNR threshold adjusting step value is determined according to the grade of the SNR threshold adjusting step value. The present claim thus provides a method for controlling outer loop power where a SNR threshold is determined (e.g., a SNR target) according to an error between the measured BER and a target BER, as well as a variance value of the error. Although Vembu may disclose a method for adjusting a SNR threshold, Vembu does not teach adjustment of this threshold with the same values as featured in claim 1.

In particular, Vembu does not teach or suggest adjusting the SNR threshold using a variance value of the error as featured in the present claim. In addition, the method of claim 1

does not use comparisons of the measured SNR and the SNR threshold as taught by Vembu. Accordingly, the parameters used to adjust the SNR threshold as featured in claim 1 is different from Vembu, which does not teach or suggest this element.

Furthermore, claim 1 features calculating grades (i.e., fuzzy values) of the error, variance value of the error, and SNR threshold adjusting step value. As taught in Fig. 3 and pages 6-9 of the present application, grade or "degree" refers to a degree of the value, rather than a total number, such as a total number of errors. For example, determination of the grade of the error between the measured BER and the target BER refers to a range of errors, rather than a distinct number of errors; hence a grade or degree of the error is a fuzzy value. As an example from the application, all of the BER errors between 0.05 and 0.3 are determined to be a BER error grade of "1", which is not an actual count of the number of errors. In contrast, Vembu teaches, such as in Fig. 4, for example, comparison of a measured BER and a target BER that follows either "below," "at," or "above" (see block 408). When the comparison results are below or above, the current measured SNR and the current SNR threshold are compared (see blocks 424 and 416). Similarly, Fig. 5 of Vembu illustrates comparison of the current measured SNR and the current SNR threshold where "numbers of errors" are calculated (see blocks 528, 512, 524). Accordingly, Vembu determines whether to adjust the SNR threshold based on different comparisons of the measured SNR and the SNR threshold as well as comparisons between suggested measured BER and a target BER without teaching or suggestion of actual conversion of the comparisons to a grade or degree, such as a fuzzy value. Accordingly, the Applicants submit that Vembu further does not teach or suggest all of the elements for which it is relied upon as teaching.

Moreover, the present Office Action alleges that Dohi discloses the featured "variance value of the error." Dohi, however, actually discloses that the BER measuring unit 22 calculates a moving average of BER according to the formula shown in col. 6, line 65, as the measure value of BER (see col. 6, lines 51-52). The purpose for using a moving average of the BER in Dohi is to accurately obtain the measure value of BER. After obtaining the moving average of BER (i.e., the measured value of BER), the BER comparator 23, compares the measure value of BER with a preset target BER to obtain the error of BER. In short, Dohi actually discloses obtaining a moving average of BER, rather than determining a variance value of the error of BER.

In order to assist the Examiner in understanding this distinction, Applicants provide the following example explaining the variance value of an error. In this example, it is assumed that the measured BER's are 0.2, 0.4, 0.9, and 1.6 at four different respective times and at each of these times, the target BER is assumed to be 0.1. Based on these conditions, the errors of each of the BER's would be 0.1 (i.e., 0.2 - 0.1), 0.3 (i.e., 0.4 – 0.1), 0.8 (i.e., 0.9 – 0.1), and 1.5 (i.e., 1.6 – 0.1) at the four respective times. The variance values of the errors are then further calculated to be 0.2 (i.e., the difference between the first and second BER errors (0.3 – 0.1)), 0.5 (0.8 – 0.3), and 0.7 (1.5 – 0.8). Thus, it is apparent that the variance value of the error is calculated from the error values. Dohi, in contrast, does not disclose or suggest these types of calculations based on the error of BER nor calculation of the variance value of error. Dohi only discloses how to accurately calculate BER and the error of BER. It is noted that Dohi does not calculate a variance value of the error of BER, just a moving average of BER. Thus, Dohi does not disclose any calculations using the error values of BER.

Moreover, the method of calculating moving averages of BER disclosed in Dohi and the method of calculating variance values of error, as featured in the present claim, are different. In particular, the calculation of average in Dohi is an additive calculation (i.e., BER (n) = α x BER (n-1) + (1-α) ERR). See col. 6, line 65. In contrast, calculation of a variance value of error is based on difference or subtraction.

In light of the above comments, the Applicants respectfully submit that the cited references do not teach or suggest all of the elements of claim 1, either combined or taken separately. Accordingly, the rejection should be withdrawn.

Additionally, in the present Office Action, various responses to Applicants previous arguments were presented. The above arguments are believed to address most of these arguments. Nonetheless, the Applicants again respectfully, but strongly, reiterate that counting the number of errors is not the same as determining a grade or degree of the error. This assertion in the Office Action is akin to saying that qualitative characteristics (e.g., a grade or degree of the error) are exactly the same as quantitative characteristics (e.g., the number the errors). This logic is simply incorrect and indefensible.

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With respect to dependent claims 2-4, and 11, the Applicants submit that these claims are believed to be allowable on their merits and also due to their dependency ultimately on independent claim 1.

In light of the foregoing comments, the Applicants respectfully request reconsideration and withdrawal of the present rejections and ask that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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